

Please type a plus sign (+) inside this box → ⊕

PTO/SB/05 (03-01)
Approved for use through 10/31/2002. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL (Only for new nonprovisional applications under 37 CFR 1.53(b))	Attorney Docket No.	
	First Inventor	ELLIOTT
	Title	CYCLONIC SEPARATOR FOR MIST COLLECTOR
	Express Mail Label	EU 680314775 US

APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application contents.	ADDRESS TO: Assistant Commissioner for Patents Box Patent Application Washington, DC 20231
---	---

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17) (w/o fee)
(Submit an original and a duplicate for fee processing)
2. ☒ Applicant claims small entity status.
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 35]
(preferred arrangement set forth below)
 - Descriptive title of the invention
 - Cross Reference to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to sequence listing, a table, or a computer program listing appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 7]
5. Oath or Declaration [Total Pages]
 - a. ☐ Newly executed (original or copy)
 - b. ☐ Copy from a prior application (37 CFR 1.63 (d))
(for continuation/divisional with Box 18 completed)
 - i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - a. ☐ Computer Readable Form (CRF)
 - b. Specification Sequence Listing on:
 - i. ☐ CD-ROM or CD-R (2 copies); or
 - ii. ☐ paper
 - c. ☐ Statements verifying identity of above copies

- | ACCOMPANYING APPLICATION PARTS | |
|---|--|
| 9. <input type="checkbox"/> Assignment Papers (cover sheet & document(s)) | |
| 10. <input type="checkbox"/> 37 CFR 3.73(b) Statement (when there is an assignee) | <input type="checkbox"/> Power of Attorney |
| 11. <input type="checkbox"/> English Translation Document (if applicable) | |
| 12. <input type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 | <input type="checkbox"/> Copies of IDS Citations |
| 13. <input type="checkbox"/> Preliminary Amendment | |
| 14. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) (Should be specifically itemized) | |
| 15. <input type="checkbox"/> Certified Copy of Priority Document(s) (if foreign priority is claimed) | |
| 16. <input type="checkbox"/> Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent. | |
| 17. <input checked="" type="checkbox"/> Other: <u>LETTER TO EXAMINER</u> | |

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☒ Continuation-in-part (CIP)

of prior application No. 09 930,770

Prior application information:

Examiner HOPKINS

Group Art Unit: 1724

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS				
<input type="checkbox"/> Customer Number or Bar Code Label	20606 (Insert Customer No. or Attach bar code label here)		or	<input type="checkbox"/> Correspondence address below
Name				
Address				
City		State	Zip Code	
Country		Telephone	Fax	

Name (Print/Type)	Keith Frantz	Registration No. (Attorney/Agent)	37828
Signature	<i>Keith Frantz</i>	Date	6-25-03

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

21905 U.S. PTO
10/606149
06/25/03

17439 U.S. PTO
06/25/03

PTO/SB/17 (01-03)
Approved for use through 04/30/2003. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL for FY 2003		Complete if Known	
Effective 01/01/2003. Patent fees are subject to annual revision.		Application Number	CIP of 09/930,770
		Filing Date	CIP filed 08/15/2001
		First Named Inventor	ELLIOTT
		Examiner Name	HOPKINS
		Art Unit	1724
		Attorney Docket No.	
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27			
TOTAL AMOUNT OF PAYMENT (\$) <div style="text-align: right; font-size: 1.2em;">681</div>			

METHOD OF PAYMENT (check all that apply) <input type="checkbox"/> Check <input type="checkbox"/> Credit card <input type="checkbox"/> Money Order <input type="checkbox"/> Other <input type="checkbox"/> None <input type="checkbox"/> Deposit Account: NO FEE ENCLOSED Deposit Account Number: _____ Deposit Account Name: _____ The Commissioner is authorized to: (check all that apply) <input type="checkbox"/> Charge fee(s) indicated below <input type="checkbox"/> Credit any overpayments <input type="checkbox"/> Charge any additional fee(s) during the pendency of this application <input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.	FEE CALCULATION (continued) 3. ADDITIONAL FEES <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> <th rowspan="2">Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> </tr> </thead> <tbody> <tr><td>1051</td><td>130</td><td>2051</td><td>65</td><td>Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>1052</td><td>50</td><td>2052</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>1053</td><td>130</td><td>1053</td><td>130</td><td>Non-English specification</td><td></td></tr> <tr><td>1812</td><td>2,520</td><td>1812</td><td>2,520</td><td>For filing a request for <i>ex parte</i> reexamination</td><td></td></tr> <tr><td>1804</td><td>920*</td><td>1804</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>1805</td><td>1,840*</td><td>1805</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>1251</td><td>110</td><td>2251</td><td>55</td><td>Extension for reply within first month</td><td></td></tr> <tr><td>1252</td><td>410</td><td>2252</td><td>205</td><td>Extension for reply within second month</td><td></td></tr> <tr><td>1253</td><td>930</td><td>2253</td><td>465</td><td>Extension for reply within third month</td><td></td></tr> <tr><td>1254</td><td>1,450</td><td>2254</td><td>725</td><td>Extension for reply within fourth month</td><td></td></tr> <tr><td>1255</td><td>1,970</td><td>2255</td><td>985</td><td>Extension for reply within fifth month</td><td></td></tr> <tr><td>1401</td><td>320</td><td>2401</td><td>160</td><td>Notice of Appeal</td><td></td></tr> <tr><td>1402</td><td>320</td><td>2402</td><td>160</td><td>Filing a brief in support of an appeal</td><td></td></tr> <tr><td>1403</td><td>280</td><td>2403</td><td>140</td><td>Request for oral hearing</td><td></td></tr> <tr><td>1451</td><td>1,510</td><td>1451</td><td>1,510</td><td>Petition to institute a public use proceeding</td><td></td></tr> <tr><td>1452</td><td>110</td><td>2452</td><td>55</td><td>Petition to revive - unavoidable</td><td></td></tr> <tr><td>1453</td><td>1,300</td><td>2453</td><td>650</td><td>Petition to revive - unintentional</td><td></td></tr> <tr><td>1501</td><td>1,300</td><td>2501</td><td>650</td><td>Utility issue fee (or reissue)</td><td></td></tr> <tr><td>1502</td><td>470</td><td>2502</td><td>235</td><td>Design issue fee</td><td></td></tr> <tr><td>1503</td><td>630</td><td>2503</td><td>315</td><td>Plant issue fee</td><td></td></tr> <tr><td>1460</td><td>130</td><td>1460</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>1807</td><td>50</td><td>1807</td><td>50</td><td>Processing fee under 37 CFR 1.17(q)</td><td></td></tr> <tr><td>1806</td><td>180</td><td>1806</td><td>180</td><td>Submission of Information Disclosure Stmt</td><td></td></tr> <tr><td>8021</td><td>40</td><td>8021</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td></td></tr> <tr><td>1809</td><td>750</td><td>2809</td><td>375</td><td>Filing a submission after final rejection (37 CFR 1.129(a))</td><td></td></tr> <tr><td>1810</td><td>750</td><td>2810</td><td>375</td><td>For each additional invention to be examined (37 CFR 1.129(b))</td><td></td></tr> <tr><td>1801</td><td>750</td><td>2801</td><td>375</td><td>Request for Continued Examination (RCE)</td><td></td></tr> <tr><td>1802</td><td>900</td><td>1802</td><td>900</td><td>Request for expedited examination of a design application</td><td></td></tr> </tbody> </table>	Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	1051	130	2051	65	Surcharge - late filing fee or oath		1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet		1053	130	1053	130	Non-English specification		1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination		1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action		1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action		1251	110	2251	55	Extension for reply within first month		1252	410	2252	205	Extension for reply within second month		1253	930	2253	465	Extension for reply within third month		1254	1,450	2254	725	Extension for reply within fourth month		1255	1,970	2255	985	Extension for reply within fifth month		1401	320	2401	160	Notice of Appeal		1402	320	2402	160	Filing a brief in support of an appeal		1403	280	2403	140	Request for oral hearing		1451	1,510	1451	1,510	Petition to institute a public use proceeding		1452	110	2452	55	Petition to revive - unavoidable		1453	1,300	2453	650	Petition to revive - unintentional		1501	1,300	2501	650	Utility issue fee (or reissue)		1502	470	2502	235	Design issue fee		1503	630	2503	315	Plant issue fee		1460	130	1460	130	Petitions to the Commissioner		1807	50	1807	50	Processing fee under 37 CFR 1.17(q)		1806	180	1806	180	Submission of Information Disclosure Stmt		8021	40	8021	40	Recording each patent assignment per property (times number of properties)		1809	750	2809	375	Filing a submission after final rejection (37 CFR 1.129(a))		1810	750	2810	375	For each additional invention to be examined (37 CFR 1.129(b))		1801	750	2801	375	Request for Continued Examination (RCE)		1802	900	1802	900	Request for expedited examination of a design application	
Large Entity		Small Entity		Fee Description	Fee Paid																																																																																																																																																																														
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																																																																																																
1051	130	2051	65	Surcharge - late filing fee or oath																																																																																																																																																																															
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet																																																																																																																																																																															
1053	130	1053	130	Non-English specification																																																																																																																																																																															
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination																																																																																																																																																																															
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action																																																																																																																																																																															
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action																																																																																																																																																																															
1251	110	2251	55	Extension for reply within first month																																																																																																																																																																															
1252	410	2252	205	Extension for reply within second month																																																																																																																																																																															
1253	930	2253	465	Extension for reply within third month																																																																																																																																																																															
1254	1,450	2254	725	Extension for reply within fourth month																																																																																																																																																																															
1255	1,970	2255	985	Extension for reply within fifth month																																																																																																																																																																															
1401	320	2401	160	Notice of Appeal																																																																																																																																																																															
1402	320	2402	160	Filing a brief in support of an appeal																																																																																																																																																																															
1403	280	2403	140	Request for oral hearing																																																																																																																																																																															
1451	1,510	1451	1,510	Petition to institute a public use proceeding																																																																																																																																																																															
1452	110	2452	55	Petition to revive - unavoidable																																																																																																																																																																															
1453	1,300	2453	650	Petition to revive - unintentional																																																																																																																																																																															
1501	1,300	2501	650	Utility issue fee (or reissue)																																																																																																																																																																															
1502	470	2502	235	Design issue fee																																																																																																																																																																															
1503	630	2503	315	Plant issue fee																																																																																																																																																																															
1460	130	1460	130	Petitions to the Commissioner																																																																																																																																																																															
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)																																																																																																																																																																															
1806	180	1806	180	Submission of Information Disclosure Stmt																																																																																																																																																																															
8021	40	8021	40	Recording each patent assignment per property (times number of properties)																																																																																																																																																																															
1809	750	2809	375	Filing a submission after final rejection (37 CFR 1.129(a))																																																																																																																																																																															
1810	750	2810	375	For each additional invention to be examined (37 CFR 1.129(b))																																																																																																																																																																															
1801	750	2801	375	Request for Continued Examination (RCE)																																																																																																																																																																															
1802	900	1802	900	Request for expedited examination of a design application																																																																																																																																																																															

FEE CALCULATION																																																																																																																																					
1. BASIC FILING FEE <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> <th rowspan="2">Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> </tr> </thead> <tbody> <tr><td>1001</td><td>750</td><td>2001</td><td>375</td><td>Utility filing fee</td><td>375</td></tr> <tr><td>1002</td><td>330</td><td>2002</td><td>165</td><td>Design filing fee</td><td></td></tr> <tr><td>1003</td><td>520</td><td>2003</td><td>260</td><td>Plant filing fee</td><td></td></tr> <tr><td>1004</td><td>750</td><td>2004</td><td>375</td><td>Reissue filing fee</td><td></td></tr> <tr><td>1005</td><td>160</td><td>2005</td><td>80</td><td>Provisional filing fee</td><td></td></tr> <tr> <td colspan="4" style="text-align: right;">SUBTOTAL (1)</td> <td>(\$)</td> <td>375</td> </tr> </tbody> </table>	Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	1001	750	2001	375	Utility filing fee	375	1002	330	2002	165	Design filing fee		1003	520	2003	260	Plant filing fee		1004	750	2004	375	Reissue filing fee		1005	160	2005	80	Provisional filing fee		SUBTOTAL (1)				(\$)	375	2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th colspan="2">Total Claims</th> <th colspan="2">Extra Claims</th> <th colspan="2">Fee from below</th> <th colspan="2">Fee Paid</th> </tr> <tr> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Independent</td> <td>40</td> <td>-20** =</td> <td>20</td> <td>x</td> <td>9</td> <td>=</td> <td>180</td> </tr> <tr> <td>Multiple Dependent</td> <td>6</td> <td>-3** =</td> <td>3</td> <td>x</td> <td>42</td> <td>=</td> <td>126</td> </tr> <tr> <td colspan="4"></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> <th rowspan="2">Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> </tr> </thead> <tbody> <tr><td>1202</td><td>18</td><td>2202</td><td>9</td><td>Claims in excess of 20</td><td></td></tr> <tr><td>1201</td><td>84</td><td>2201</td><td>42</td><td>Independent claims in excess of 3</td><td></td></tr> <tr><td>1203</td><td>280</td><td>2203</td><td>140</td><td>Multiple dependent claim, if not paid</td><td></td></tr> <tr><td>1204</td><td>84</td><td>2204</td><td>42</td><td>** Reissue independent claims over original patent</td><td></td></tr> <tr><td>1205</td><td>18</td><td>2205</td><td>9</td><td>** Reissue claims in excess of 20 and over original patent</td><td></td></tr> <tr> <td colspan="4" style="text-align: right;">SUBTOTAL (2)</td> <td>(\$)</td> <td>306</td> </tr> </tbody> </table>	Total Claims		Extra Claims		Fee from below		Fee Paid										Independent	40	-20** =	20	x	9	=	180	Multiple Dependent	6	-3** =	3	x	42	=	126									Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	1202	18	2202	9	Claims in excess of 20		1201	84	2201	42	Independent claims in excess of 3		1203	280	2203	140	Multiple dependent claim, if not paid		1204	84	2204	42	** Reissue independent claims over original patent		1205	18	2205	9	** Reissue claims in excess of 20 and over original patent		SUBTOTAL (2)				(\$)	306
Large Entity		Small Entity		Fee Description			Fee Paid																																																																																																																														
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																																																		
1001	750	2001	375	Utility filing fee	375																																																																																																																																
1002	330	2002	165	Design filing fee																																																																																																																																	
1003	520	2003	260	Plant filing fee																																																																																																																																	
1004	750	2004	375	Reissue filing fee																																																																																																																																	
1005	160	2005	80	Provisional filing fee																																																																																																																																	
SUBTOTAL (1)				(\$)	375																																																																																																																																
Total Claims		Extra Claims		Fee from below		Fee Paid																																																																																																																															
Independent	40	-20** =	20	x	9	=	180																																																																																																																														
Multiple Dependent	6	-3** =	3	x	42	=	126																																																																																																																														
Large Entity		Small Entity		Fee Description	Fee Paid																																																																																																																																
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																																																		
1202	18	2202	9	Claims in excess of 20																																																																																																																																	
1201	84	2201	42	Independent claims in excess of 3																																																																																																																																	
1203	280	2203	140	Multiple dependent claim, if not paid																																																																																																																																	
1204	84	2204	42	** Reissue independent claims over original patent																																																																																																																																	
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent																																																																																																																																	
SUBTOTAL (2)				(\$)	306																																																																																																																																

**or number previously paid, if greater; For Reissues, see above

SUBMITTED BY		(Complete if applicable)	
Name (Print/Type)	Keith Frantz	Registration No. (Attorney/Agent)	37828
Signature		Telephone	815-987-9820
		Date	

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of)	
)	
Inventor: ELLIOTT)	
)	
Title: CYCLONIC SEPARATOR FOR MIST)	
COLLECTORS)	
)	
Serial No. _____)	Examiner HOPKINS, Robert A.
)	
Filing Date: _____)	Group Art Unit 1724

LETTER TO EXAMINER ACCOMPANYING CIP APPLICATION

Mail Stop - PATENT APPLICATION - CIP
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This letter accompanies a continuation-in-part patent application of U.S. Patent Application 09/930,770, filed 08/15/2001.

For the examiner's convenience, a marked-up copy of the original specification, showing the changes from the original specification to the continuation-in-part specification is included herewith. The formatting of the continuation-in-part specification has been changed from the original application, including addition of paragraph numbers to the specification.

Briefly, the CIP application adds an alternate embodiment separator, shown in new Figures 9-15, and discussed in detail in paragraphs [0046] through [0052] of the CIP specification. This embodiment provides for, among other things, an alternate flow interrupter in the form of a drop-down chamber. The remainder of the specification has been revised for conformance with the addition of this alternate embodiment.

The CIP application contains 40 claims. For the examiner's reference:

- CIP claims 1-7 correspond to original claims 1-7, with CIP claim 7 modified per the amendment in the original application as responsive to a 112 objection in the office action in the original application,
- Original claims 1-7 were rejected in the office action; they have, however, been re-presented in the CIP application for the reasons discussed below;
- CIP claims 8-13 correspond to claims 8 and 10-14 as allowed in the original application;
- CIP claims 14 and 16-19 correspond generally to claims 15-19 as allowed in the original application, EXCEPT that recitation to a flow restrictor is not presented in CIP claim 14, in conformance with the alternate embodiment of the CIP application, recitation to the flow restrictor is now presented in CIP claim 15 which depends from claim 14, and CIP claim 20 presents recitation to the alternate embodiment flow interrupter of the CIP application.
- CIP claims 21-26 correspond to claims 26-31 as allowed in the original application;
- CIP claims 27-40 are additional claims to which Applicant believes he is entitled.

Claims 20-25 of the original application, that were first presented in an amendment to the application, do not find correspondence in CIP claims. The claims 20-25 were presented in response to a rejection of original claim 1 and indication of allowability of original claim 7 dependent therefrom.

Specifically, original claim 1 was rejected as under 35 U.S.C. § 103(a) as being unpatentable over Nutter (US 3,885,935) in view of Brereton (US 1,411,606). In response to this 103 rejection, claim 1 was amended to include the limitations of dependent claim 2 which was indicated allowable, and new independent claim 20 (along with dependent claims 21-25) was presented with the combined limitations of original claim 1 and dependent claim 7 which was also indicated allowable in the Office Action.

Upon further review of this matter, Applicant does not believe the 103 rejection of claim 1 was appropriate.

The 103 rejection of claim 1 in the original application was based on Nutter (US 3,885,935) in view of Brereton (US 1,411,606). In particular, and among other things, the position in the office action was that it would have been obvious to provide the flow interrupter of Brereton into the separator of Nutter "so that the liquid is deflected from a centrifugal motion into the drain hole [of Nutter] for collection."

However, applicant does not believe the suggested combination would have been obvious. The separator of Nutter includes a collection chamber 10 from which liquid flows into the drain hole 12/14. The collection chamber is separated from the air flowing through the separator by barrier element 30. Thus, in Nutter, the liquid in the collection chamber is already separated from the air flowing through the separator, and from this collection chamber it flows into the drain hole. And it is the barrier element 30 that is to prevent the liquid from leaving the collection chamber and re-entering the air flow stream. In contrast, Brereton teaches to position a flow interrupter element in the air stream to separate the contaminate from the flowing air. In other words, Brereton teaches an interrupter to separate contaminate from the air flowing through the device, and Nutter separates the liquid from the air stream and contains it in the collection chamber. Therefore, there is no motivation to provide the flow interrupter of Brereton in the collection chamber for the reason taught in Brereton because the contaminate is already separated from the air flow.

Nor is the motivation suggested in the office action supported by either Brereton or Nutter or the other prior art of record. The specification of Nutter indicates quite extensive testing and experimentation was performed on the device, and the downcomer pot 12 addressed the need for collection of the liquid from the collection chamber. The Nutter specification further indicates that the downcomer pot "gives the liquid a longer residence time in the apparatus for gravitational separation of the liquid and the vapor phases" (col. 4, lines 58-60). Addition of the flow interrupter of Brereton to this arrangement, as suggested in the office action, is not only not warranted, but would tend to defeat the desired "residence time" in the downcomer pot by redirecting and disrupting the flow patterns therein.

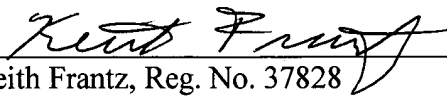
Therefore, applicant respectfully submits that the combination suggested in the office action to reject original claim 1 is not supported or warranted, was made in hindsight in view of the original application, and was therefore improper.

Accordingly, applicant has represented original claims 1-7 for further consideration by the examiner, and not re-presented claims 20-25 of the original application.

In view of the foregoing, the claims in the CIP application are allowable over the prior art of record, and covers all embodiments of the application.

Applicant thanks the examiner for the Notice of Allowability on the original application, and looks forward to favorable consideration of the CIP application.

Respectfully submitted,



Keith Frantz, Reg. No. 37828
401 West State Street, Suite 200
Rockford, Illinois 61101
(815) 987-9820
(815) 987-9869 [fax]